JRIIE Journal of Research Innovation and Implications in Education
Center for Research Implications & Practice

Website: www.jriiejournal.com ISSN 2520-7504 (Online) Vol.10, Iss.4, 2026 (pp. 2024 - 2037)

Modeling the Effects of Self-Confidence, Coping Skills, Family Support, Peer Support, and Mentoring on University Students' Psychological Well-Being: A PLS-SEM Approach

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Abstract: *This study examines the effects of self-confidence, coping skills, family support, peer support, and mentoring on the psychological well-being of undergraduate students in Dodoma city. Employing a quantitative, cross-sectional, correlational design, data were collected from 355 valid questionnaires administered to undergraduate students. The structural model was evaluated using partial least squares structural equation modeling (PLS-SEM) via SmartPLS version 4.1. Measurement and structural model assessments confirmed robust reliability, convergent validity, discriminant validity, and model fit (SRMR = 0.071, NFI = 0.918). Harman's single-factor test indicated that common method variance (23.9%) did not threaten data integrity. Hypotheses testing revealed that self-confidence (β = 0.291, p < 0.001), family support (β = 0.291, p < 0.001), mentoring (β = 0.158, p < 0.001), coping skills (β = 0.095, p < 0.001), and peer support (β = 0.071, p = 0.005) all exerted positive and statistically significant direct effects on psychological well-being. Findings highlight that fostering both personal agency and social support systems is critical. Universities should implement structured interventions integrating self-confidence building, counselling services, peer networks, and formal mentoring programs to enhance student psychological well-being.*

Keywords: *Psychological Well-Being, Self-Confidence, Coping Skills, Family Support, Peer Support, Mentoring, University Students*

How to cite this work (APA):

Mungure, B., Lusuva, F. J. & Ndetaiywa, F. R. (2026). Modeling the Effects of Self-Confidence, Coping Skills, Family Support, Peer Support, and Mentoring on University Students' Psychological Well-Being: A PLS-SEM Approach. *Journal of Research Innovation and Implications in Education, 10*(4), 2024 – 2037. **https://doi.org/10.59765/bsr85r**

1. Introduction

University students are in a vital developmental phase with demands on their academic life, identity crises, social changes and future job uncertainty. Psychological well-being (PWB) is a complex construct that includes self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989), and these stressors often impact psychological well-being. Poor student mental health has become a worldwide issue, and incidence of anxiety, depression and burnout have been reported to be particularly high in higher education systems (Bewick et al., 2010). An awareness of the protective factors that maintain PWB is therefore necessary for individual health and well-being and institutional effectiveness.

Self-confidence is a basic component of personal resources, typically expressed in terms of self-efficacy beliefs. In social cognitive theory (Bandura, 1986; Bandura & Walters, 1977), people's self-efficacy expectations affect the onset of action, efforts to perform successfully, staying on task when difficulties arise, and emotional response to difficulties. Students who are more self-efficacious evaluate their academic and social demands as manageable and feel less distressed, and they perceive more positive than negative values of PWB on all of the dimensions of Ryff's model (Freire et al., 2019;

Madson et al., 2022; Ryff, 1989). Self-efficacy has been found to be consistently associated with mental health outcomes and to buffer the effects of stress across the university population (Chemers et al., 2001). A recent meta-analysis of undergraduate samples confirmed a robust positive association between self-efficacy and psychological well-being (Kusnadi et al., 2026), and contemporary studies continue to demonstrate that self-efficacy predicts multiple dimensions of Ryff's model among university students (Ryff & Keyes, 1995; Sabouripour et al., 2021).

Another critical personal resource is coping skills. According to the transactional model of stress and coping (Folkman, 2020; Lazarus, 1984), stress is the result of an appraisal of environmental demands in relation to available resources. Adaptive coping (problem-focused) and emotion-focused coping (affective regulation) help individuals adapt successfully and maintain their well-being. Recent research has validated that adaptive coping strategies (e.g., cognitive restructuring, seeking social support) are positive predictors of PWB while maladaptive coping strategies (e.g., self-criticism) are negative (Freire et al., 2019; Moreno-Montero et al., 2024; Wang et al., 2023). Indirectly, effective coping operates between personal resources and psychological outcomes among university students (Freire et al., 2019).

Social support systems are also critical, in addition to individual resources. Family support offers emotional security, instrumental support, and a sense of belonging, which help to reduce the effects of academic and developmental stress (Cohen & Wills, 1985). Perceived family support has been found to have a direct and indirect relation to PWB, with the latter being mediated by psychological capital and adaptive coping, from both longitudinal and cross-sectional evidence (Wang et al., 2023). Large-scale recent SEM studies continue to confirm direct and mediated pathways from family support to student well-being via psychological capital and institutional support (Chai et al., 2026). Peer relationships positively influence self-efficacy, social adaptation, and decreased loneliness (Byrom, 2018) and have been found to have lasting positive effects in college students' mental health through self-efficacy and social adaptation pathways. Recent three-year longitudinal evidence further demonstrates that peer support predicts mental health via a chain of self-efficacy and social adaptation (Zhang, 2026).

Mentoring is a specific type of developmental assistance. (Kram, 1988) and (Kram & Isabella, 1985) identified four career-related functions (sponsorship, coaching, exposure, and role modeling) and four psychosocial functions (counselling, friendship, role modeling and exposure) that support the process of protégé development. In a college or university setting, mentoring relationships with faculty or advisors, or with senior peers, can increase self-efficacy, academic integration, and well-being (Kram & Isabella, 1985). Structured mentoring programs can lower anxiety and stress levels, and enhance psychological flexibility and belonging (Grégoire et al., 2018). Contemporary evaluations of peer and faculty mentoring programmes continue to link higher engagement with improved academic self-efficacy, sense of belonging, and overall well-being among first-year and undergraduate students (Werntz et al., 2026).

Although many studies have focused on single predictors, there are limited studies that have explored the combined effects of self-confidence, coping skills, family support, peer support and mentoring on the PWB of university students in an integrated structural model. Existing investigations tend to be limited to one or a handful of predictors and frequently rely on traditional regression or covariance-based SEM that make distributional assumptions. Partial least squares structural equation modeling (PLS-SEM) is suitable for complex models, small samples, and prediction-based research (Hair et al., 2019). The application of PLS-SEM enables the measurement and structural models to be evaluated simultaneously, and it is suitable for processing formative and reflective indicators that are frequently used in social science research.

The present study fills these gaps by modeling the direct effects of five key predictors: self-confidence, coping skills, family support, peer support and mentoring on the psychological well-being of university students. The investigation adds to theory by incorporating personal resource perspectives (self-efficacy and coping) and social support and mentoring perspectives in one predictive model. In practice, the results can be used to guide the university counselling, student affairs programming and policy efforts to improve the protective factors most strongly linked to student flourishing. This helps institutions use their resources more efficiently and target interventions where they will have the greatest impact on psychological well-being.

1.1 Statement of the Problem

Despite the recognized importance of personal and social resources for university students' psychological well-being (Freire et al., 2019; Kusnadi et al., 2026; Moreno-Montero et al., 2024; Prasetyo et al., 2024; Wang et al., 2023), limited studies have examined the combined effects of self-confidence, coping skills, family support, peer support, and mentoring within a single integrated structural model. Most existing research has focused on isolated predictors (Byrom, 2018; Chai et al., 2026; Grégoire et al., 2018; Zhang, 2026) and relied on traditional statistical approaches that impose restrictive assumptions. As a result, there is insufficient empirical evidence on how these five factors jointly influence the psychological well-being of undergraduate students, particularly in the Tanzanian higher education context.

1.2 Research Objectives

Specifically, the study aimed:

1. To examine the effect of self-confidence on university students' psychological well-being.
2. To examine the effect of coping skills on university students' psychological well-being.
3. To examine the effect of family support on university students' psychological well-being.
4. To examine the effect of peer support on university students' psychological well-being.
5. To examine the effect of mentoring on university students' psychological well-being.

2. Literature Review

2.1 Theoretical Underpinnings

The (Ryff, 1989; Ryff & Keyes, 1995) drew from developmental, clinical and humanistic traditions to identify six dimensions of positive functioning: self-acceptance (positive assessment of oneself and past experiences), positive relations with others (warm, trusting interpersonal relations), autonomy (self-determination and independence), environmental mastery (competence in managing the environment), purpose in life (meaning and directedness), and personal growth (continued development and realization of potential). In contrast to purely hedonic definitions of wellbeing that focus on pleasure or life satisfaction, the eudaimonic definition of wellbeing is related to optimal psychological functioning and is relevant to the developmental tasks of emerging adulthood (Freire et al., 2019; Ryff & Keyes, 1995). Secondly, the social cognitive theory proposed by (Bandura, 1997; Bandura & Walters, 1977) and in particular the self-efficacy theory supports the concept of self-confidence. Self-efficacy is defined as a person's confidence in his or her ability to plan and perform behaviours to cope with anticipated situations. Mastery experiences, vicarious experiences, verbal persuasion, and physiological or affective states are sources of these beliefs. High self-efficacy fosters proactive engagement, resilience, and adaptive emotional regulation, underpinning several aspects of Ryff's model particularly environmental mastery, autonomy and self-acceptance (Bandura, 1997; Freire et al., 2019). Third, the contribution of coping skills is explained by (Folkman, 2020; Lazarus, 1984) theory of stress and coping. Stress has been defined as a relational process that occurs when some environmental demands are perceived as challenging or exceeding resources. Coping includes cognitive and behavioural responses to dealing with those demands. Problem-focused coping is an attempt to modify the stressor and emotion-focused coping is an attempt to reduce emotional stress. Adaptive coping strategies lower psychological costs of stress and help to facilitate positive adaptation directly leading to increased PWB (Freire et al., 2019; Lazarus, 1984). Fourth, the role of social support, especially the main-effect and stress-buffering models developed by (Cohen & Wills, 1985), are captured. Social support can have a direct positive impact on well-being (main-effect model) by delivering basic needs for belonging and for worth or can buffer people from the pathogenic impact of stress by offering resources that are commensurate to situational demands (buffering model). Family support is usually emotional and instrumental and is based on long-term attachment bonds. Peer support is a horizontal, reciprocal validation and practical help with people who are experiencing the same problems. According to (Kram, 1988; Kram & Isabella, 1985), mentoring is a developmental relationship that is conceptualized as having both career and psychosocial dimensions such that competence is enhanced and identity is developed. These are all complementary systems which increase the coping and self-efficacy resources available.

2.2 Hypotheses Development

2.2.1 Self-Confidence and Psychological well-being

It has been broadly defined that self-confidence is a personal resource, mainly in terms of self-efficacy, which influences the meaning that university students give to and their reactions to academic and life demands. Social cognitive theory (Bandura, 1997; Bandura & Walters, 1977) states that people's self-efficacy beliefs affect their choices of outcome goals, their level of effort, their persistence in the presence of obstacles, and their emotional responses to challenging situations. Increased self-efficacy is associated with students' perceptions of stressors as manageable problems instead of threats, thereby decreasing anxiety and providing adaptive interaction with university life. Empirically, self-efficacy has been found to have positive relationships with various dimensions of psychological well-being, such as self-acceptance, environmental mastery, autonomy and purpose in life (Chemers et al., 2001; Freire et al., 2019; Madson et al., 2022). In the university setting, with emerging new academic challenges, social changes and future uncertainties, it is essential that students have a high level of self-confidence to keep their psychological balance and to achieve personal development. It is hypothesized that:

H1: Self-confidence had a significant positive effect on their psychological well-being.

2.2.2 Coping skills and Psychological well-being

Coping skills are cognitive and behavioural tools used to deal with internal and/or external demands that are evaluated as stressful or straining. In the transactional model of stress and coping by (Folkman, 2020; Lazarus, 1984), the coping strategies used during stress,

specifically adaptive problem-focused and emotion-focused coping, will affect the psychological results of stressful encounters. Adaptive coping includes problem solving, seeking constructive support and cognitive restructuring, which helps students control negative emotions, solve academic and interpersonal problems and maintain a sense of control. Maladaptive strategies, however (e.g. avoidance or self-criticism), can tend to intensify distress, and they can be counterproductive to well-being. New research with students at university schools confirms that adaptive coping is a strong predictor of psychological wellbeing and that it can often act as a mediating relationship between other personal resources and psychological wellbeing (Freire et al., 2019; Wang et al., 2023). University life always poses challenges to academic functioning, social adjustment, and developmental tasks, and effective coping abilities are essential to maintain eudaimonic functioning across the 6 dimensions of the (Ryff, 1989) measures. It is hypothesized that

H2: Coping skills had a significant positive effect on their psychological well-being.

2.2.3 Family support and Psychological well-being

Family support is a key and ongoing source of emotional security, instrumental support and positive feedback for young adults that remains important throughout their time in higher education. Social support theory, as detailed by (Cohen & Wills, 1985), states that perceived availability of supportive relationships satisfy basic needs for belonging and esteem and also buffer individuals from the negative impact of stressors. For students at university, family support can be the emotional foundation, resources (financial, logistical, or advisory), and a feeling of unconditional acceptance, which will boost self-worth and resilience. Empirical studies have shown that perceived family support is positively correlated with psychological well-being, depression symptoms, psychological capital, and so on (Wang et al., 2023). Family support is particularly important for the areas of positive relationships with others, self-acceptance and environmental mastery in (Ryff, 1989) model. Family support is hypothesized to have a large, positive, direct impact on university students' psychological well-being because family relationships are particularly significant during the emerging adulthood years.

H3: Family support have positively and significantly on psychological well-being

2.2.4 Peer support and psychological well-being

Peer support are the emotional, informational and companionship resources that students offer one another to each other who have similar life experiences and academic background. Peer relationships are different from hierarchical relationships, as they are mutually satisfying, reciprocal, and shared, and they lessen feelings of isolation and normalise the difficulties of being a student at university. There is a positive relationship between peer support and mental health outcomes, self-efficacy and social adaptation shown by the longitudinal and cross-sectional evidence in the study of college students (Byrom, 2018). Peer networks are also relevant to contexts for identity exploration, emotional validation, and the development of interpersonal skills that resonate with (Ryff, 1989) dimension of positive relations with others. Peer support can also offer students some respite from academic stressors and a sense of belonging to the campus community, which are important factors in psychological health. With social support theory (Cohen & Wills, 1985) in mind and evidence of the positive impact of peer relationships in higher education, peer support is expected to greatly affect the psychological well-being of university students.

H4: Peer support have positively and significantly on psychological well-being

2.2.5 Mentoring and Psychological well-being

Mentoring is a developmental relationship between a more advanced individual who offers a less advanced one career-related information and psychosocial support. (Kram, 1988; Kram & Isabella, 1985) seminal research identified two general types of mentoring functions: career functions (sponsorship, coaching, exposure–visibility, challenging assignments) and psychosocial functions (role modeling, acceptance–confirmation, counselling, friendship). In the university context, the mentoring relationship of the mentor/faculty member, academic advisor, or senior student helps protégé deal with the rigors of college, helps clarify career aspirations, helps build academic identity, and helps build confidence. It has been proven that mentoring relationships have a positive impact on self-efficacy, lessen stress and anxiety, improve psychological flexibility, and help with overall well-being (Grégoire et al., 2018). Mentoring in turn directly contributes to several areas of (Ryff, 1989; Ryff & Keyes, 1995) model, such as personal growth, purpose in life and environmental mastery, through fostering competence and belonging. In this regard, the positive impact of mentoring on university students' psychological health is expected to be high.

H5: Mentoring have positively and significantly on psychological well-being

2.3 Conceptual Model Description

The conceptual model positions psychological well-being as the endogenous construct predicted by five exogenous constructs: self-confidence, coping skills,

family support, peer support, and mentoring. Each of the five independent variables is hypothesized to exert a direct positive path to psychological well-being. The model is fully recursive and prediction-oriented, consistent with the goals of PLS-SEM. The model integrates personal agency (self-confidence and coping) with social-ecological resources (family, peers, and mentors) to provide a comprehensive account of the determinants of university students' eudaimonic well-being.

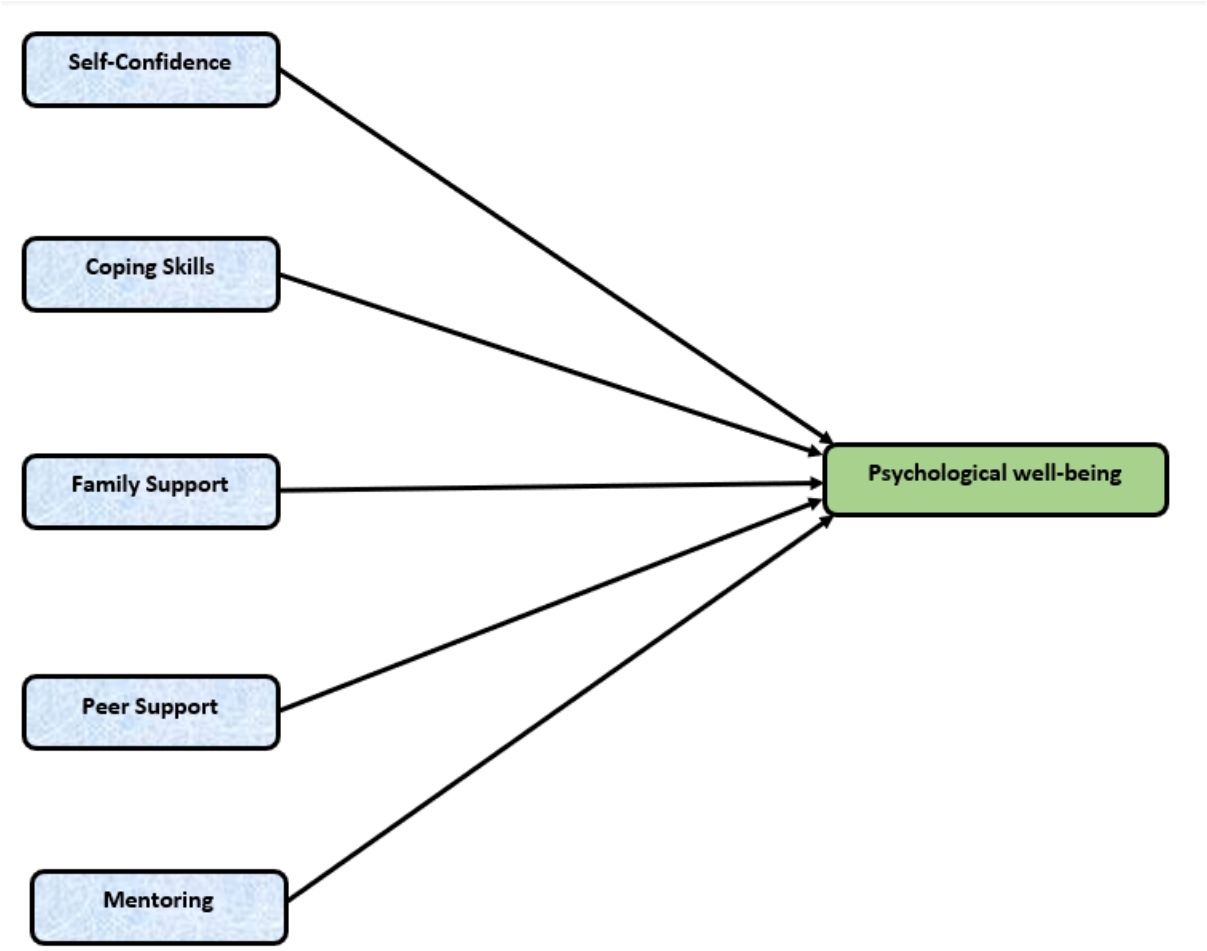

Figure 1: Conceptual model

3. Methodology

3.1 Research Design

This study adopted a quantitative, cross-sectional, correlational research design to examine the direct effects of self-confidence, coping skills, family support, peer support, and mentoring on the psychological well-being of undergraduate university students. The design was selected because it allows the simultaneous assessment of multiple hypothesized relationships at a single point in time and is well suited to the prediction-oriented goals of partial least squares structural equation modeling (PLS-SEM). The study was conducted among undergraduate students enrolled in public and private universities in Dodoma City, Tanzania.

3.2 Samples and Sampling

The target population comprised all currently registered undergraduate university students in Dodoma City. A stratified random sampling technique was employed to ensure proportional representation across academic years, faculties/colleges, and gender. After thorough screening of completed questionnaires for completeness and response quality, a final sample of 355 valid responses was retained for analysis.

3.3 Data Collection Tools

Data were collected using a structured questionnaire. All constructs were measured with previously validated multi-item scales adapted to the university context and rated on five- or seven-point Likert scales. Self-

confidence was assessed with the Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). Coping skills were measured using selected adaptive subscales of the Brief COPE Inventory (Carver, 1997). Family support and peer support were operationalized through the respective subscales of the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). Mentoring was measured with items capturing career-related and psychosocial functions derived from Kram's mentoring framework (Kram, 1988; Kram & Isabella, 1985). Psychological well-being was assessed with the Ryff Scales of Psychological Well-Being (Ryff & Keyes, 1995).

3.4 Data Collection Procedures

Data were gathered through both online (secure survey platforms) and paper-based questionnaires after formal institutional permission had been obtained from the respective universities. Participation was voluntary. Completed questionnaires were carefully screened for completeness and response quality before inclusion in the final dataset.

3.5 Data Analysis

Data were analyzed using SmartPLS software version 4.1. The analysis followed a two-stage approach. First, the measurement model was evaluated for indicator reliability (outer loadings), internal consistency reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted), and discriminant validity (heterotrait-monotrait ratio). Second, the structural model was assessed by examining path coefficients, the coefficient of determination (R^2), effect sizes (f^2), predictive relevance (Q^2), and collinearity statistics (variance inflation factors). Statistical significance of the path coefficients was determined through bias-corrected and accelerated bootstrapping with 5,000 resamples.

3.6 Ethical Considerations

Formal institutional permission was obtained from the participating universities prior to data collection. Participation was entirely voluntary, and respondents were informed of the study's purpose, their right to withdraw at any time without consequence, and the confidential nature of their responses. No personally identifying information was collected, and all data were handled and stored securely to protect participants' privacy.

4. Results and Discussion

4.1 Results

4.1.1. Common Method Variance (CMV)

To assess the potential threat of common method bias (CMB) arising from self-reported survey data, Harman's single-factor test was performed in accordance with established guidelines (Podsakoff et al., 2003). The unrotated exploratory factor analysis revealed that the largest single factor accounted for 23.9% of the total variance, which is substantially below the standard critical threshold of 50% (Podsakoff et al., 2003). This result confirms that no single general factor explains the majority of the variance among the variables, indicating that common method variance does not pose a significant threat to the validity of the measurement or structural model findings in this study.

4.1.2. Measurement Model Results

The evaluation of the reflective measurement model established robust indicator reliability, internal consistency reliability, convergent validity, and acceptable indicator collinearity across all constructs, adhering to recommended PLS-SEM assessment criteria (Hair et al., 2019). Individual indicator reliability was confirmed as all item outer loadings ranged from 0.788 to 0.934, exceeding the standard threshold of 0.708. Internal consistency was demonstrated through high Cronbach's alpha (from 0.823 to 0.914) and composite reliability values (from 0.847 to 0.931, with PS requiring minor typographical verification), comfortably exceeding the 0.70 threshold. Convergent validity was established, as Average Variance Extracted (AVE) values ranged between 0.702 and 0.794, well above the required 0.50 cut-off. Finally, all indicator Variance Inflation Factor (VIF) values ranged from 1.777 to 3.252, falling below the critical threshold of 5.0 and confirming the absence of severe lateral multicollinearity among measurement items (Hair et al., 2019; Kock, 2015).

Table 1: Construct reliability, indicator reliability, and convergent validity

	Outer Loading	Cronbach's alpha	Composite reliability	AVE	VIF
CS		0.908	0.909	0.783	
CS1	0.852				2.299
CS2	0.891				2.756
CS3	0.903				3.203
CS4	0.893				3.060
FS		0.903	0.904	0.775	
FS1	0.874				3.179
FS2	0.879				3.252
FS3	0.893				3.051
FS4	0.875				3.085
MT		0.862	0.894	0.702	
MT1	0.788				2.640
MT2	0.814				2.759
MT3	0.894				2.569
MT4	0.850				2.202
PS		0.870	1.090	0.779	
PS1	0.934				2.117
PS2	0.875				2.784
PS3	0.837				2.293
PWB		0.823	0.847	0.736	
PWB1	0.875				1.777
PWB2	0.871				2.213
PWB3	0.827				1.798
SC		0.914	0.931	0.794	
SC1	0.900				2.920
SC2	0.928				3.145
SC3	0.917				3.072
SC4	0.815				2.104

Note: Coping Skills (CS), Family Support (FS), Mentoring (MT), Peer Support (PS), Psychological Well-Being (PWB), and Self-Confidence (SC)
Source: SmartPLS 4.1 Output

4.1.3 Discriminant validity results (HTMT and Fornell–Larcker)

Discriminant validity was assessed using the Heterotrait-Monotrait ratio of correlations (HTMT), which is the recommended criterion for evaluating construct distinctiveness in PLS-SEM (Henseler et al., 2015). As presented in Table 2, all HTMT values ranged between 0.097 (between PS and CS) and 0.652 (between MT and FS), remaining well below both the conservative threshold of 0.85 (Hair et al., 2019) and the liberal cut-off of 0.90 (Henseler et al., 2015). These results confirm that each latent construct such as Coping Skills (CS), Family Support (FS), Mentoring (MT), Peer Support (PS), Psychological Well-Being (PWB), and Self-Confidence (SC) are empirically distinct from the others, successfully establishing discriminant validity across the model.

Table 2: Heterotrait-Monotrait Ratio (HTMT)

	CS	FS	MT	PS	PWB	SC
CS						
FS	0.419					
MT	0.464	0.652				
PS	0.097	0.348	0.277			
PWB	0.353	0.620	0.534	0.275		
SC	0.148	0.381	0.321	0.236	0.529	

Note: Coping Skills (CS), Family Support (FS), Mentoring (MT), Peer Support (PS), Psychological Well-Being (PWB), and Self-Confidence (SC)
Source: SmartPLS 4.1 Output

Discriminant validity was further confirmed using the Fornell-Larcker criterion, which requires that the square root of the Average Variance Extracted (AVE) for each construct exceed its highest correlation with any other latent variable (Fornell & Larcker , 1981; Hair & Alamer, 2022). As shown in Table 3, the diagonal values representing the square roots of the AVEs 0.885 for CS, 0.880 for FS, 0.838 for MT, 0.883 for PS, 0.858 for PWB, and 0.891 for SC are all substantially higher than the corresponding off-diagonal inter-construct correlations (which range from 0.013 between PS and CS to 0.593 between MT and FS). These findings demonstrate that each construct shares greater variance with its own indicators than with those of any other construct, providing additional empirical support for discriminant validity.

Table 3: Fornell-Larcker criterion

	CS	FS	MT	PS	PWB	SC
CS	0.885					
FS	0.380	0.880				
MT	0.421	0.593	0.838			
PS	0.013	0.353	0.263	0.883		
PWB	0.311	0.550	0.479	0.282	0.858	
SC	0.137	0.357	0.308	0.230	0.473	0.891

Note: Coping Skills (CS), Family Support (FS), Mentoring (MT), Peer Support (PS), Psychological Well-Being (PWB), and Self-Confidence (SC)
Source: SmartPLS 4.1 Output

4.1.4 Model fit Summary

Model fit was evaluated to assess the capability of the specified structural model to represent the empirical data using standard fit indices in PLS-SEM (Henseler et al., 2016). As shown in Table 4, both the saturated and estimated models yielded identical values across all criteria. The Standardized Root Mean Square Residual (SRMR) was 0.071, which falls comfortably below the conservative threshold of 0.08, indicating acceptable model fit (Hair & Alamer, 2022). Additionally, the Normed Fit Index (NFI) achieved a value of 0.918, exceeding the recommended benchmark of 0.90 (Hair & Alamer, 2022), while the unweighted least squares discrepancy (d_ULS = 1.259), geodesic discrepancy (d_G = 0.439), and Chi-square = 3324.707 metrics further reflect satisfactory fit parameters without substantial model misfit.

Table 4: Model fit summary

	Saturated model	Estimated model
SRMR	0.071	0.071
d_ULS	1.259	1.259
d_G	0.439	0.439
Chi-square	3324.707	3324.707
NFI	0.918	0.918

Source: SmartPLS 4.1 Output

4.1.5 Predictive Relevance

The out-of-sample predictive relevance of the structural model was assessed using the PLSpredict procedure (Shmueli et al., 2016, 2019). As presented in Table 5, the Q^2predict value for Psychological Well-Being (PWB)

was 0.416, which is well above zero, demonstrating medium-to-high predictive relevance for the endogenous construct (Hair et al., 2019; Shmueli et al., 2019). Furthermore, the Root Mean Squared Error (RMSE = 0.766) and Mean Absolute Error (MAE = 0.580) values confirm that the model yields favourable out-of-sample prediction accuracy.

Table 5. Predictive Relevance summary

	Q^2predict	RMSE	MAE
PWB	0.416	0.766	0.580

Note: Psychological Well-Being (PWB)
Source: SmartPLS 4.1 Output

4.1.6 Structural model and hypotheses testing

The structural model path coefficients and hypotheses testing results presented in Table 6 indicate that all five hypothesized direct relationships predicting psychological well-being (PWB) were statistically significant and supported (Hair et al., 2019). Specifically, coping skills predicting psychological well-being (CS on PWB: $\beta = 0.095$, $t = 3.611$, $p = 0.000$), family support (FS on PWB: $\beta = 0.291$, $t = 9.461$, $p = 0.000$), mentoring (MT on PWB: $\beta = 0.158$, $t = 5.631$, $p = 0.000$), peer support (PS on PWB: $\beta = 0.071$, $t = 2.808$, $p = 0.005$), and self-confidence (SC on PWB: $\beta = 0.291$, $t = 10.419$, $p = 0.000$) all exerted positive and significant direct effects on university students' psychological well-being. Among these predictors, family support and self-confidence demonstrated the strongest positive impacts on PWB, while peer support yielded the smallest yet statistically significant path coefficient, confirming the empirical validity of the proposed structural paths.

Table 6: Hypotheses testing results

Hypotheses	Path	Original sample(β)	Sample mean	Standard deviation	T statistics	P values	Decision
H1	**CS -> PWB**	0.095	0.096	0.026	3.611	0.000	Accept
H2	**SC -> PWB**	0.291	0.290	0.028	10.419	0.000	Accept
H3	**FS -> PWB**	0.291	0.291	0.031	9.461	0.000	Accept
H4	**PS -> PWB**	0.071	0.073	0.025	2.808	0.005	Accept
H5	**MT -> PWB**	0.158	0.158	0.028	5.631	0.000	Accept

Note: Coping Skills (CS), Family Support (FS), Mentoring (MT), Peer Support (PS), Psychological Well-Being (PWB), and Self-Confidence (SC)
Source: SmartPLS 4.1 Output

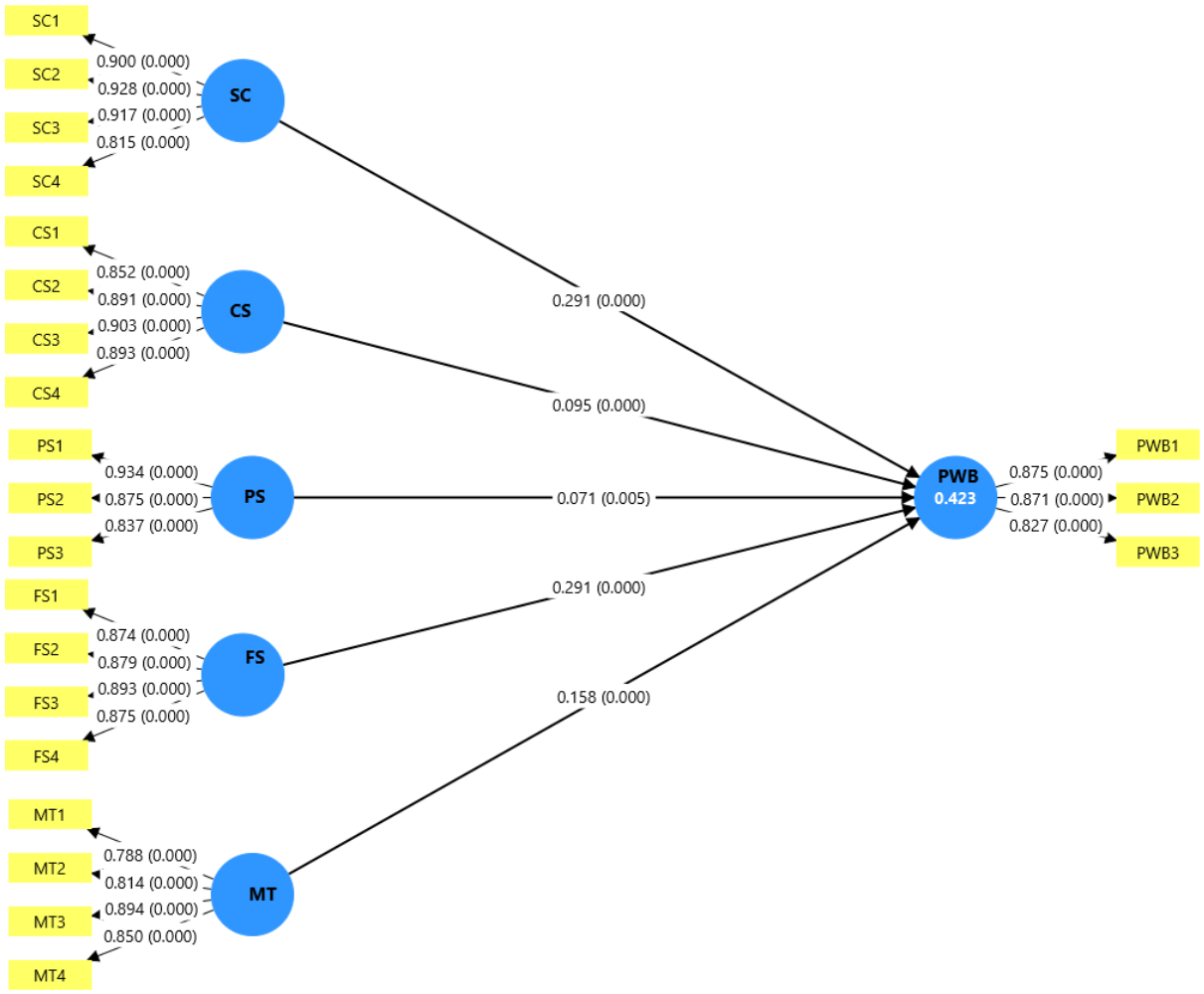

Figure 2: Structural model

Source: SmartPLS 4.1 Output

4.2 Discussion of findings

The results revealed that self-confidence exerts a significant positive effect on university students' psychological well-being. This finding strongly supports and aligns with (Bandura, 1977; Bandura & Walters, 1977) social cognitive theory, which posits that self-efficacy beliefs determine how individuals approach challenges, the effort they invest, and their emotional responses to adversity. Students with higher self-confidence are more likely to interpret academic and social demands as manageable rather than threatening, thereby fostering greater self-acceptance, environmental mastery, autonomy, and purpose in life the core dimensions of (Ryff, 1989) eudaimonic well-being model. The relatively strong path coefficient indicates that self-confidence is one of the most influential predictors in the model, sharing the highest effect size with family support. This is consistent with prior research demonstrating that self-efficacy robustly predicts psychological well-being among university students (Chemers et al., 2001; Freire et al., 2019) and with more recent meta-analytic and primary evidence (Kusnadi et al., 2026; Sabouripour et al., 2021). Theoretically, self-confidence functions as a personal agency resource that enables students to regulate stress, persist through difficulties, and experience growth. Practically, the finding underscores the value of interventions that deliberately cultivate mastery experiences, positive feedback, and success opportunities within the university environment, as these are the primary sources through which self-efficacy is developed (Bandura, 1997).

Coping skills demonstrated a significant but relatively modest positive effect on psychological well-being. This result is theoretically grounded in (Folkman, 2020) and (Lazarus, 1984) transactional model of stress and coping, which emphasizes that adaptive cognitive and behavioural strategies determine whether stressful encounters lead to positive or negative psychological outcomes. Students who employ effective problem-focused and emotion-focused coping are better able to manage academic pressure, interpersonal challenges, and developmental transitions, thereby protecting and enhancing their well-being. Although the effect size is smaller than those of self-confidence and family support, the path remains statistically significant, indicating that

coping skills make an independent contribution to PWB even when other resources are present. This finding echoes recent studies showing that adaptive coping strategies (e.g. cognitive restructuring and constructive support-seeking) positively predict psychological well-being among university students (Freire et al., 2019; Moreno-Montero et al., 2024). The relatively weaker coefficient may reflect that coping skills operate partly as a mechanism through which other resources (such as self-confidence or social support) exert their influence, or that students' coping repertoires vary considerably in quality and consistency. Nevertheless, the significant direct effect affirms the practical importance of systematically teaching and reinforcing adaptive coping strategies within student support services.

Family support emerged as one of the strongest predictors of psychological well-being. This result is consistent with social support theory, particularly the main-effect and stress-buffering models proposed by (Cohen & Wills, 1985). Family support provides emotional security, instrumental assistance, and affirmative feedback that fulfil fundamental needs for belonging and esteem while buffering the impact of academic and life stressors. Within (Ryff, 1989) framework, family support is especially relevant to the dimensions of positive relations with others, self-acceptance, and environmental mastery. The equal magnitude of the family-support and self-confidence paths, suggests that external relational resources and internal personal resources are comparably important for students' eudaimonic functioning. These findings corroborate earlier research demonstrating that perceived family support enhances psychological capital and well-being among university students (Wang et al., 2023) and align with large-scale contemporary SEM evidence of both direct and mediated effects (Chai et al., 2026). Theoretically, the result highlights the continuing developmental significance of family ties during emerging adulthood, even as students gain independence. Practically, it implies that universities should not view students in isolation but should consider ways to strengthen or complement family-based support systems, particularly for students who may experience strained or distant family relationships.

Peer support showed a significant positive, though comparatively smaller, effect on psychological well-being. This finding aligns with social support theory (Cohen & Wills, 1985) and with research emphasizing the unique value of horizontal, reciprocal relationships among individuals facing similar challenges. Peer support reduces loneliness, normalizes academic and emotional struggles, and fosters a sense of campus belonging all of which contribute to positive relations with others and overall well-being (Ryff, 1989). Longitudinal evidence has shown that peer support enhances self-efficacy and social adaptation, producing sustained improvements in mental health (Zhang, 2026). The modest path coefficient relative to family support and self-confidence may indicate that peer relationships, while beneficial, are more variable in quality and intensity, or that their influence is partly mediated through other constructs (such as self-confidence or coping). Nevertheless, the statistically significant effect affirms that peer networks constitute an independent protective resource. Universities can therefore enhance student well-being by deliberately cultivating structured peer-support programs, mentoring circles, and community-building initiatives that strengthen the quality and accessibility of peer relationships.

Mentoring exerted a significant positive effect on psychological well-being. This result is consistent with (Kram & Isabella, 1985) mentoring theory, which identifies both career-related functions (coaching, sponsorship, exposure) and psychosocial functions (role modeling, counselling, acceptance) as critical for protégé development. Mentoring relationships help students navigate academic demands, clarify purpose, build competence, and develop a stronger sense of identity and belonging outcomes that map directly onto several of (Ryff, 1989) well-being dimensions, particularly personal growth, purpose in life, and environmental mastery. The moderate effect size positions mentoring as a more influential predictor than coping skills or peer support, yet secondary to self-confidence and family support. This pattern suggests that formal or informal developmental relationships with more experienced individuals provide unique value that neither horizontal peer support nor purely personal resources fully replicate. Prior research has similarly shown that mentoring reduces stress and anxiety while increasing psychological flexibility and well-being among university students (Grégoire et al., 2018; Werntz et al., 2026). Theoretically, mentoring functions as a specialized social resource that simultaneously builds personal agency and provides relational support. Practically, the finding underscores the importance of expanding high-quality mentoring opportunities within higher education institutions.

Collectively, the five predictors explained 42.3% of the variance in psychological well-being ($R^2 = 0.423$), indicating moderate explanatory power and confirming that self-confidence, coping skills, family support, peer support, and mentoring jointly contribute meaningfully to students' eudaimonic functioning. The strongest effects of self-confidence and family support highlight the dual importance of internal personal resources and primary relational support, while the significant contributions of mentoring, coping skills, and peer support demonstrate that a multi-level resource portfolio is optimal. These findings integrate (Bandura, 1977) social cognitive theory, Lazarus and Folkman's coping theory, Cohen and Wills' social support theory, (Kram, 1988) mentoring framework, and (Ryff, 1989) multidimensional well-being model into a coherent predictive account of university student flourishing.

5. Conclusion and Recommendations

5.1 Conclusion

This study examined the effects of self-confidence, coping skills, family support, peer support, and mentoring on university students' psychological well-being using a PLS-SEM approach. All five hypothesized paths were statistically significant and positive. Self-confidence and family support emerged as the strongest predictors (both $\beta = 0.291$), followed by mentoring ($\beta = 0.158$), coping skills ($\beta = 0.095$), and peer support ($\beta = 0.071$). The model accounted for 42.3% of the variance in psychological well-being. The findings affirm that both personal resources (self-confidence and coping skills) and social resources (family support, peer support, and mentoring) play important and complementary roles in promoting eudaimonic well-being among university students. The results provide empirical support for an integrated theoretical framework combining social cognitive theory, stress-and-coping theory, social support theory, and mentoring theory within Ryff's multidimensional model of psychological well-being.

5.2 Recommendations

Based on the findings of this study, the following recommendations were made:

1. Universities should adopt a multi-resource approach that simultaneously addresses personal agency and social support rather than relying on isolated interventions. Specifically, institutions should design structured programs to build students' self-confidence through mastery experiences and success-oriented activities, while student counselling and wellness services systematically integrate adaptive coping skills into orientation and first-year curricula.
2. Universities ought to strengthen family support mechanisms through engagement initiatives and targeted aid for resource-limited students, expand professionalized peer-support schemes and community-building activities, and scale up formal mentoring programs involving faculty, staff, and senior students to ensure the effective delivery of both career and psychosocial functions.

5.3 Areas for Further Studies

Future research should examine potential mediating and moderating mechanisms (for example, whether coping skills or self-confidence mediate the effects of social support and mentoring on psychological well-being). Longitudinal designs are needed to establish temporal precedence and causal direction. Comparative studies across different cultural, institutional, and socioeconomic contexts would enhance generalizability. Qualitative or mixed-methods investigations could deepen understanding of how students experience and utilize these resources in daily university life. Finally, intervention studies that experimentally manipulate one or more of the five predictors would provide stronger evidence of their practical impact on psychological well-being.

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